

**U.S. Department of the Interior  
Bureau of Land Management  
Little Snake Field Office  
455 Emerson Street  
Craig, CO 81625-1129**

## **CATEGORICAL EXCLUSION**

NUMBER: DOI-BLM-CO-N010-2014-0007CX

PROJECT NUMBER: COC76430

PROJECT NAME: SWAN MT Survey

PROPOSED ACTION TYPE: Zonge International Inc. has submitted a Notice of Intent and Authorization to Conduct Oil and Gas Geophysical Exploration Authorization (NOI) on Federal Surface in the Little Snake Resource Area.

LEGAL DESCRIPTION: See Attachment A

- MT 5-1: Sec. 3, T. 5 N., R. 88 W., 6<sup>th</sup> PM, Routt County
- MT 12-2 & 12-3: Sec.16, T. 6 N., R. 92 W., 6<sup>th</sup> PM, Moffat County

APPLICANT: Zonge International Inc.

DESCRIPTION OF PROPOSED ACTION: Zonge International Inc. (Zonge) has filed a Notice of Intent (NOI) to conduct geophysical operations in the BLM Little Snake Field Office Resource Area in Sec. 3, T. 5 N., R. 88 W., and Sec.16, T. 6 N., R. 92 W., 6<sup>th</sup> PM, in Moffat and Routt Counties during spring 2014.

Zonge proposes to conduct a magnetotelluric survey (MT) on three abandoned well pad locations. MT surveys involve making measurements of naturally occurring ambient electrical noise. The signals of interest emanate from the ionosphere and from distant thunderstorm activity. The survey would require minimal surface disturbance and is a passive measurement technique that requires no active source, as with buggy mounted seismic operations. The survey measures the electric field and the perpendicular magnetic field in two orthogonal directions. These fields are related to the subsurface electrical resistivity which can be calculated from the measurements. Lower frequencies penetrate to greater depths which allow the calculation of the variation of resistivity with depth below each measurement station.

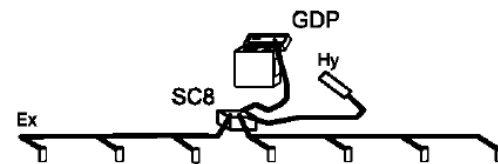
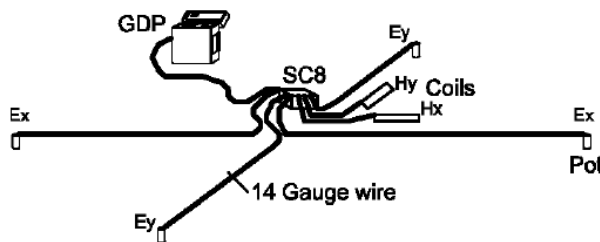
The measurement stations would involve laying ~100 meters insulated wire on the ground in two perpendicular directions (see Figure 2). The ends of the wires are connected to small electrodes that are placed in holes nominally 8 inches in diameter and 6-8 inches deep. The magnetic field would be measured using magnetic antennas that are cylinders approximately 2 inches in diameter and 53 inches in length (see Figure 1). Two antennas would be laid horizontally on the ground and buried ~4 inches deep to avoid wind vibration and temperature variations. A third

antenna would be buried vertically to a depth of 50 inches (if possible). The measurement stations would be set up during the day, left to record data overnight, and removed the following morning. The equipment would be sited out of the way of road travel. If snow conditions permit, the antennas may be simply laid on the ground surface and covered with snow. A hand auger would be used and the soil from the hole would be placed next to the hole and then replaced and reclaimed when the equipment is removed.



Figure 1: Field Equipment used for an MT survey.

#### Tensor MT Setup



#### Scalar MT Setup

Figure 2: Tensor and scalar MT field Layouts.

There would be no new roads or new construction on BLM lands and the proponent would only use existing roads and trails to access the survey locations. The measurement stations would be accessed from existing roads via pick-up truck, ATV, or snowmobile where access is not plowed. The crew would be composed of two people, who would have a total of two ATVs or snowmobiles operating at any time. No cultural resources have been identified within the proposed project locations as a result of prior investigations (c.f., Conner 2013 [BLM-LSFO#

11.8.2013] and Rood 1990 [OAHP #RT.LM.R15] for the MT 5-1 location; and Barclay 1994 [OAHP #MF.LM.R246], and Connor and Davenport 2011, 2012 [BLM-LSFO#s 11.3.2011 and 11.5.2012, respectively] for the MT 12-2 and 12-3 locations). Furthermore, the operator has committed to restricting vehicular use to existing access routes (Kratt [Zonge] to Ryan [BLM-LSFO], email dated February 14, 2014). Therefore, the project may proceed with an effect determination of “*no historic properties affected*” and no further work is required.

The BLM Standard Geophysical Conditions of Approval would apply to this permit (see Attachment A).

LAND USE PLAN (LUP) CONFORMANCE REVIEW: The proposed action was reviewed for conformance (43 CFR 1610.5, BLM 1617.3) with the following plan:

Name of Plan: Little Snake Record of Decision and Resource Management Plan

Date Approved: October 2011

Results: The Proposed Action is in conformance with the LUP because it is specifically provided for in the following LUP goals, objectives, and management decisions:

Allow for the availability of the federal coal and oil shale estate for exploration and development. Objectives for achieving these goals include:

- Identify and make available the federal coal and oil shale estate for exploration and development, consistent with appropriate suitability studies, to increase energy supplies.
- Facilitate reasonable, economical, and environmentally sound exploration and development of the federal coal and oil shale estate.
- Promote the use of BMPs, including implementation of sound reclamation standards.

Section/Page: Section 2.13 Energy and Minerals/page RMP-36

CATEGORICAL EXCLUSION REVIEW: The proposed action is categorically excluded from further documentation under the National Environmental Policy Act (NEPA) in accordance with 43 CFR Part 46.210 and qualifies as a categorical exclusion under 516 DM 11.9 F. (2).

A CX can now be used for this type of action when no temporary or new road construction is proposed [Section 11.9B(6)]. The use of this new CX for geophysical exploration operations should be documented using the “Categorical Exclusion Documentation Format” contained in Attachment 2 of Washington Office Instruction Memorandum No. 2007-208, dated September 28, 2007 (Attachment 2). If the use of a CX for geophysical operations does not pass the “extraordinary circumstances” test as described in 516 DM 2.3A(3) and Appendix 2 (Attachment 3), the proposed action will need to be analyzed with an environmental assessment or an environmental impact statement.

This categorical exclusion is appropriate in this situation because there are no extraordinary circumstances potentially having effects that may significantly affect the environment. The proposed action has been reviewed, and none of the extraordinary circumstances described in 43 CFR Part 46.215 applies:

Extraordinary Circumstances	YES	NO
1. Have significant adverse effects on public health and safety.	___	X
2. Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990); floodplains (Executive Order 11988); national monuments; migratory birds; and other ecologically significant or critical areas.	___	X
3. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA Section 102(2)(E)].	___	X
4. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks.	___	X
5. Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects.	___	X
6. Have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects.	___	X
7. Have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by either the bureau or office.	___	X
8. Have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species.	___	X
9. Violate a Federal law, or a State, local, or tribal law or requirement imposed for the protection of the environment.	___	X
10. Have the potential for a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898).	___	X
11. Limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007).	___	X
12. Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112).	___	X

**INTERDISCIPLINARY REVIEW:**

Specialist	Resource	Date
Archaeologist	Cultural Resources	3/3/2014
Rangeland Mgmt. Spec.	T&E Plants	3/5/2014
Wildlife Biologist	T&E Animals	3/5/2014

**NAME OF PREPARER:** Shawna Wiser

**NAME OF ENVIRONMENTAL COORDINATOR:** Kathryn McKinstry

DATE:

COMPLIANCE WITH NEPA

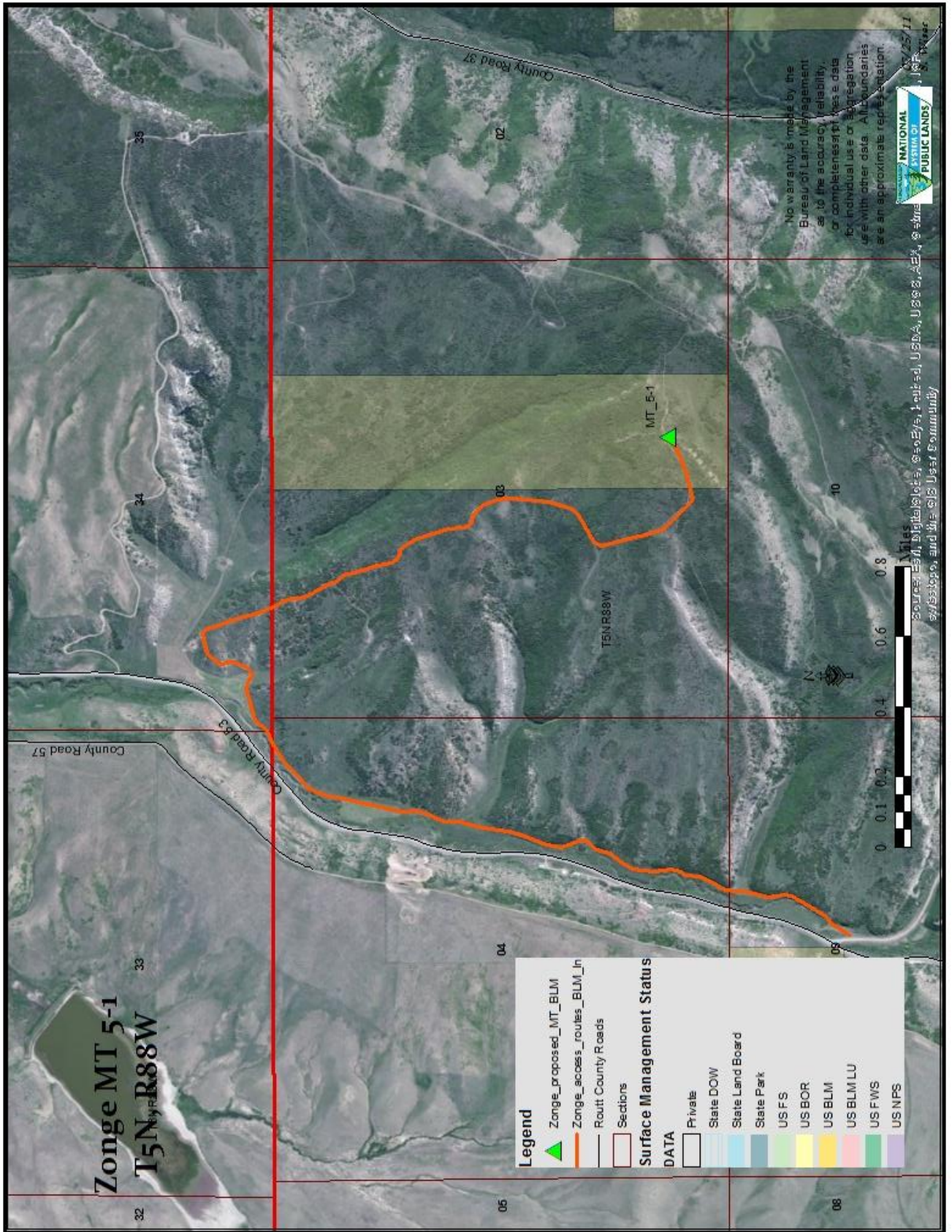
This action is listed in the Department Manual (516 DM 2, Appendix 1 and 516 DM 11) as an action that may be categorically excluded. I have evaluated the action relative to the 12 criteria listed above and have determined that it does not represent an exception and is, therefore, categorically excluded from further environmental analysis.

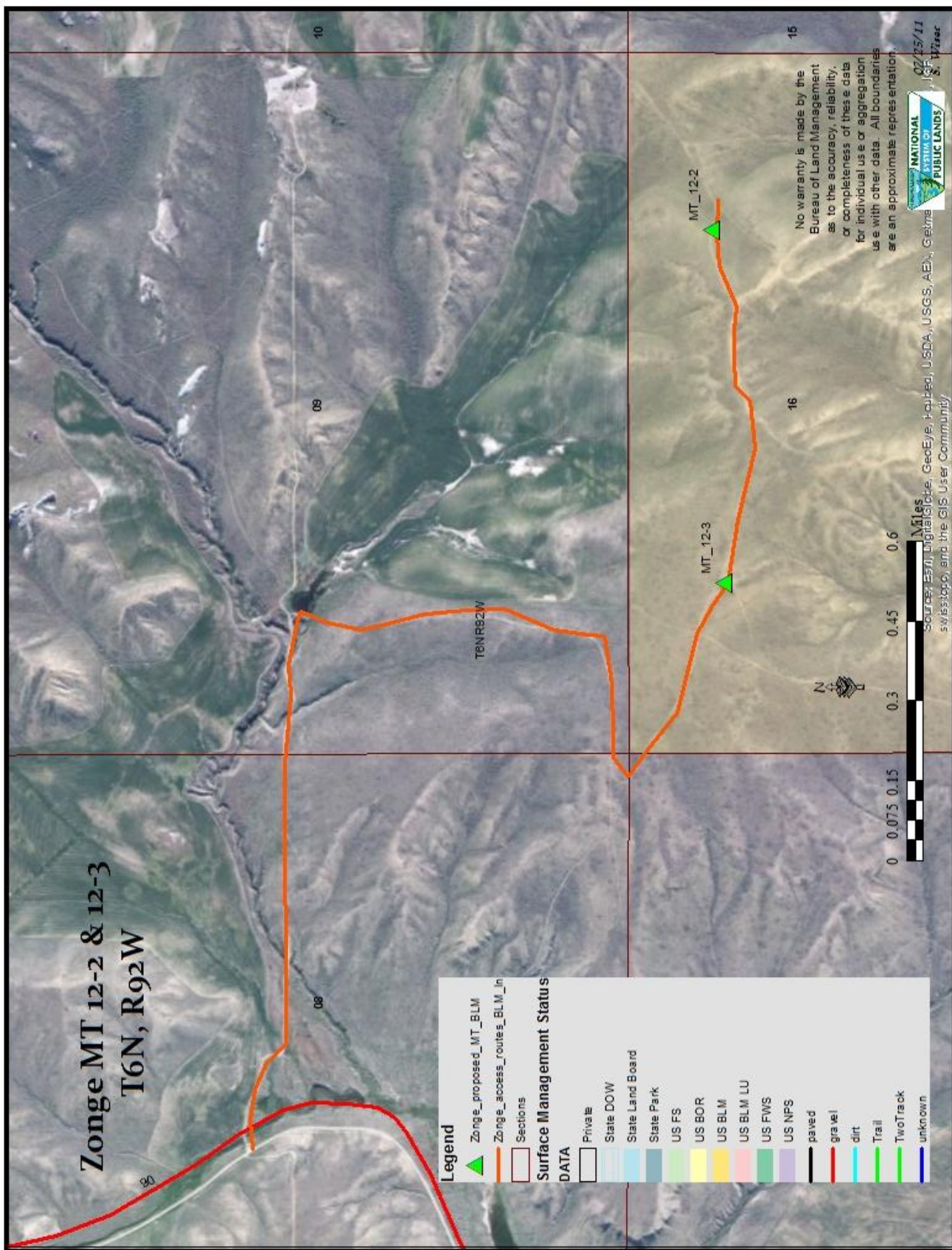
SIGNATURE OF AUTHORIZED OFFICIAL: /s/ Tim Wilson, for,  
Wendy Reynolds, Field Manager

DATE SIGNED: 03/06/14

**Attachment A:** Location Maps

**Attachment B:** BLM Standard Terms and Conditions





Attachment B  
BLM Standard Terms and Conditions (H-3150-1)

1. The operator shall contact the BLM LSFO Authorized Officer (AO) (970-826-5000) at least 48 hours prior to the start of the project.
2. This permit does not relieve the proponent from the requirement to obtain other required local, state, and federal permits.
3. All vehicle travel will be contained to existing roads and 2-tracks. Surface disturbance and vehicular travel will be limited to the approved location and approved access route. Any additional area needed will be approved in advance.
4. Vehicular travel shall be suspended when ground conditions are wet enough to cause rutting or other noticeable surface deformation and severe compaction. As a general rule, if vehicles or other project equipment create ruts in excess of four inches deep when traveling cross-country over wet soils, the soil shall be deemed too wet for vehicular use.
5. The staging area(s) shall be situated with good, safe access to county roads or state highways.
6. The staging areas shall be kept clean and free of litter. Appropriate human waste facilities will be provided and properly maintained. Such waste facilities shall be removed from the site upon completion of the project.
7. Roads will not be constructed for this geophysical project authorized under this categorical exclusion.
8. Operators of vehicles and equipment shall be responsible for not damaging fences and keeping gates as found. As a last resort, should a fence be cut for access, that fence must be repaired to former or better condition, after equipment has passed through.
9. Any and all tire tracks on hundred feet (100'), leading away from an established dirt or two-track road situated on public lands, will be hand raked to blend into the surrounding soil surface.
10. If soil is disturbed to the extent that erosion is likely or visual impacts are readily apparent, the disturbed areas will be rehabilitated utilizing the following techniques:

Ruts and vehicle tracks will be filled with soil and obliterated by either hand raking or similar method. When completing this work, care will be taken to minimize disturbance to surrounding lands that have not been disturbed. All areas where rehabilitation work is accomplished will be reseeded with the seed mixture specified below:

Seed Mix	Species	Lbs. PLS/acre	Range Sites
	Western wheatgrass	3	Alkaline Slopes, Clayey
	Streambank wheatgrass	2	Foothills, Clayey Slopes,
	Thickspike wheatgrass	2	Claypan, <b>Mountain</b>
	Indian ricegrass	1	<b>Shale</b> , Shallow Slopes, Loamy 9-11

	Hood's phlox	1	
	Scarlet globemallow	0.5	
	Cicer milkvetch	1	
	Fourwing saltbush	2	
	Nuttall's saltbush	1	
	Winterfat	1	

The seeded area should be hand raked to assure the seed is covered with approximately  $\frac{1}{4}$  to  $\frac{1}{2}$  inch of soil. This seeding should be accomplished during the late fall, in October or November, before moisture conditions become prohibitive.

The seed shall be certified, pure live seed, and seed tags must be submitted to the AO. Certified weed free seed is to be used to rehabilitate disturbed land.

11. If any unanticipated prehistoric or historic archaeological sites or paleontological sites are encountered during the geophysical work, the work shall stop and the AO and/or the BLM archaeologist will be contacted. The BLM will assume responsibility for evaluation and determination of significance, related to the historical or archaeological site. All known cultural resource sites will be avoided. Collection of any cultural or paleontological artifacts, bones or fossils from federal lands is specifically prohibited.
12. Visible migratory bird nests will be avoided and not disturbed.
13. All equipment will be power-washed prior to entering federal lands to help mitigate the spread of noxious plants.
14. If oil, lubricants and other petroleum or man-made products are spilled onto the ground surface, the AO will be contacted and provided specific information about the spill or leak. Spills and leaks will be cleaned from the soil and any contaminated material will be disposed of at an authorized facility.
15. All flagging, lath, pin flags, and similar material used in the project will be removed and disposed of at an authorized facility.
16. All applicant-committed environmental protection measures documented in the NOI and plan of operations will be complied with in addition to these terms and conditions.